WHAT IS CLAIMED IS:

1. An antenna comprising:

an antenna element that is formed in a substantially spherical shape;

a conductive rod that penetrates through the antenna element and that is electrically conducted to the antenna element; and

a conductive circular plate that is disposed on a base end side of the conductive rod so as to be substantially orthogonal to the conductive rod,

wherein a feeding point is provided at a portion where the base end side of the conductive rod and the conductive circular plate intersect each other.

2. The antenna according to claim 1,

wherein the antenna element is a hollow spherical shell formed of conductive metal.

3. The antenna according to claim 2,

wherein the spherical shell is formed with a slit substantially parallel to an axial direction of the conductive rod.

4. The antenna according to claim 1,

wherein the spherical shell is a conductive layer that is formed on an outer circumferential surface of a support body formed of an insulating material.

5. The antenna according to claim 4,

wherein the support body is a sphere of synthetic resin, on a surface of which a conductive layer is formed by plating.

6. The antenna according to claim 4 or 5,

wherein the conductive layer is formed with a slit substantially parallel to an axial direction of the conductive rod.

7. The antenna according to claim 1,

wherein a plurality of antenna elements are fitted to the conductive rod.

8. The antenna according to claim 1 or 7,

wherein an insulating bushing is fitted at a substantially central portion of the conductive circular plate, and

wherein the conductive rod is provided upright in a central opening of the insulating bushing.

9. The antenna according to claim 1 or 7,

wherein a connecter sleeve is linked or fitted on a surface of the conductive circular plate on a side opposite to a surface thereof on which the conductive rod is provided upright,

wherein the connector sleeve is screwed with a connector of a coaxial cable, wherein a core wire of the coaxial cable is connected to the conductive rod while a shield wire thereof is connected to the conductive circular plate.

10. The antenna according to claim 1 or 7,

wherein the antenna element is slidably fitted to the conductive rod, and

wherein a distance from the conductive circular plate to the antenna element can be changed.

11. An antenna comprising a reflecting plate formed in a parabolic shape and a primary radiator fitted to a focus of the reflecting plate,

wherein the primary radiator comprises: the antenna element that is formed in the substantially spherical shape; the conductive rod that penetrates through the antenna element and that is electrically conducted to the antenna element; and

the conductive circular plate that is disposed on a base end side of the conductive rod so as to be substantially orthogonal to the conductive rod.

12. An antenna comprising a dielectric lens and the primary radiator fitted to a focus of the dielectric lens,

wherein the primary radiator comprises: the antenna element that is formed in the substantially spherical shape; the conductive rod that penetrates through the antenna element and that is electrically conducted to the antenna element; and

the conductive circular plate that is disposed on the base end side of the conductive rod so as to be substantially orthogonal to the conductive rod.